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Sequence Listing could not be accepted due to errors.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866)  
217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: [year=2009; month=5; day=28; hr=12; min=33; sec=4; ms=333; ]

=====

\*\*\*\*\*

Reviewer Comments:

<140> 10/082,973

2002-02-26

Please insert a <141> at the beginning of the above "2002-02-26" line;  
<141> is a mandatory numeric identifier indicating the current filing  
date.

<210> 8

<211> 56

<212> DNA

<213> E. coli

Please spell out the Genus ("Escherichia") in the above <213> response;  
per Sequence Rules, show the Genus species in that response. Same  
response in subsequent sequences.

<210> 20

<211> 34

<212> DNA

<213> Mus musclus

Please change the above <213> response to "Mus musculus".

<210> 21

<211> 36

<212> DNA

<213> HBV

Please spell out the virus in the above <213> response; same in Sequence

22.

<210> 51

<211> 364

<212> DNA

213> Artificial Sequence

<220>

<223> pSnip ribozyme cassette

Please add an opening bracket ("<") to the above <213> numeric identifier. It must be <213>.

\*\*\*\*\*

Application No: 10082973 Version No: 3.0

Input Set:

Output Set:

**Started:** 2009-05-28 10:39:30.012  
**Finished:** 2009-05-28 10:39:33.620  
**Elapsed:** 0 hr(s) 0 min(s) 3 sec(s) 608 ms  
**Total Warnings:** 45  
**Total Errors:** 2  
**No. of SeqIDs Defined:** 73  
**Actual SeqID Count:** 73

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (1)
W 213	Artificial or Unknown found in <213> in SEQ ID (2)
W 213	Artificial or Unknown found in <213> in SEQ ID (3)
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (6)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)
W 402	Undefined organism found in <213> in SEQ ID (8)
W 402	Undefined organism found in <213> in SEQ ID (9)
W 402	Undefined organism found in <213> in SEQ ID (10)
W 402	Undefined organism found in <213> in SEQ ID (11)
W 402	Undefined organism found in <213> in SEQ ID (12)
W 402	Undefined organism found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 402	Undefined organism found in <213> in SEQ ID (20)
W 402	Undefined organism found in <213> in SEQ ID (21)
W 402	Undefined organism found in <213> in SEQ ID (22)
W 213	Artificial or Unknown found in <213> in SEQ ID (37)
W 213	Artificial or Unknown found in <213> in SEQ ID (38)
W 213	Artificial or Unknown found in <213> in SEQ ID (39)

**Input Set:**

**Output Set:**

**Started:** 2009-05-28 10:39:30.012  
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**Actual SeqID Count:** 73

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (40)
W 213	Artificial or Unknown found in <213> in SEQ ID (41)
W 213	Artificial or Unknown found in <213> in SEQ ID (42)
W 213	Artificial or Unknown found in <213> in SEQ ID (43)
W 213	Artificial or Unknown found in <213> in SEQ ID (44)
W 213	Artificial or Unknown found in <213> in SEQ ID (45)
W 213	Artificial or Unknown found in <213> in SEQ ID (46)
W 213	Artificial or Unknown found in <213> in SEQ ID (47)
W 213	Artificial or Unknown found in <213> in SEQ ID (48) This error has occurred more than 20 times, will not be displayed
E 249	Order Sequence Error <212> -> <220>; Expected Mandatory Tag: <213> in SEQID ( 51 )
W 402	Undefined organism found in <213> in SEQ ID (54)
W 402	Undefined organism found in <213> in SEQ ID (55)
W 402	Undefined organism found in <213> in SEQ ID (56)
W 402	Undefined organism found in <213> in SEQ ID (57)
W 402	Undefined organism found in <213> in SEQ ID (58)
W 402	Undefined organism found in <213> in SEQ ID (59)
W 402	Undefined organism found in <213> in SEQ ID (60)
W 402	Undefined organism found in <213> in SEQ ID (61)
W 402	Undefined organism found in <213> in SEQ ID (62)
W 402	Undefined organism found in <213> in SEQ ID (63)
W 402	Undefined organism found in <213> in SEQ ID (64) This error has occurred more than 20 times, will not be displayed

**Input Set:**

**Output Set:**

**Started:** 2009-05-28 10:39:30.012  
**Finished:** 2009-05-28 10:39:33.620  
**Elapsed:** 0 hr(s) 0 min(s) 3 sec(s) 608 ms  
**Total Warnings:** 45  
**Total Errors:** 2  
**No. of SeqIDs Defined:** 73  
**Actual SeqID Count:** 73

Error code	Error Description
E 250	Structural Validation Error; Sequence listing may not be indexable

# SEQUENCE LISTING

<110> Norris, James S.  
 Clawson, Gary A.  
 Schmidt, Michael G.  
 Hoel, Brian D.  
 Pan, Wei-Hua  
 Dolan, Joseph W.

<120> TISSUE-SPECIFIC AND TARGET RNA-SPECIFIC RIBOZYMES

<130> 14017-0004002

<140> 10/082,973  
 2002-02-26

<150> 09/338,942

<151> 1999-06-24

<150> 60/090,560

<151> 1998-06-24

<150> 60/096,502

<151> 1998-08-14

<160> 73

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 492

<212> DNA

<213> Artificial Sequence

<220>

<223> ARN promoter

<400> 1

actcgcgat catcttcacc atcggccgca actcctgcgg gatatactcg tctcctcct	60
ccaccggcac ccccatggta ggggccagct cgcgcctgc ctgggaaagc tgtacatgt	120
gateggcggc gtcggtgcgg gggccgggt ctccgcctg ctcgcggtg ccggtccgtg	180
cggccttgcc gtccgcggcg gcgcgcgatg agggcgccac ctgggtggtg atccagccac	240
tgagggtcaa cattccagtc actccgggaa aaatggaatt ctccattgg atcgccccac	300
gcgtcgcgaa cttgagcccc ctttcgtcg ccccttgaca gggtgcgaca ggtagtcgca	360
gttggttgac gcaagtcact gattggaaac gccatcgcc tgcagaaat ggtcgttgcc	420
agacctatgg ctggcaccg catcgcggt gcgttaccct tactcctgt gtgcctttaa	480
cctagcaagg ac	492

<210> 2

<211> 1113

<212> DNA

<213> Artificial Sequence

<220>

<223> PROC promoter

<400> 2

aattcctcga	agtccttgcg	ctgcttgctg	ttcatgatgt	cgtagatcag	cgcgatgcacc	60
tgccttggtt	ccagcgggtg	caggttgatc	cggcgtagat	cgccatccac	ccggatcatg	120
ggtggcaggc	cggcggagag	gtgcaggtcc	gaagcgccct	gtttggcact	gaaggcgagc	180
agctcggtaa	tatccatggg	actccccaat	tacaagcaag	caggtagaat	gccgccaaag	240
ccgcgctctc	ggacaaggaa	aacaccggat	gagccagggt	gcttccagga	cacgcgtggt	300
gtcctgcgcc	agacgcggaa	cctcgacact	ggaacaggaa	gatggccatc	gaggccggcg	360
gtttcgaggg	cgtcgagccg	acgcgcagcc	cacttccata	gggcgcaggt	aatgtccacg	420
atagcagaga	atattgcaaa	ggttgccgcg	cgcacccgtg	aggcagcgca	agctgcgggg	480
cgcgatccgg	ccacgggtcg	cctgctcgcc	gtgagcaaga	ccaagcccg	cgcgcgggtg	540
cgcgaggcgc	acgcgcgcgg	ccttcgcgac	ttcggcgaaa	actacctgca	ggaggccctc	600
ggcaagcagg	ccgaactggc	cgacctgccc	ttgaactggc	acttcacg	ccccatccag	660
tcgaacaaga	cgcggcccat	cgcgcagcat	ttccagtggg	tgcactcgg	ggaccggttg	720
aagatcgctc	agcgcctgtc	ggagcaacgc	ccggccgggc	tgcgcgccct	gaatgtctgc	780
ctgcagggtc	acgtcagcgg	cgaagccagc	aagtccggct	gcgcgcccg	ggacctgccg	840
gcccctggccg	aggccgtgaa	gcaactgccc	aacctccgat	tgcgtggcct	gatggccatc	900
cccgaaacca	ccgcggaacg	cgcgcgcgaa	cacgcgcgct	tcgcgccgct	gcgcgaaactg	960
ctgctggacc	tgaaccttgg	cctggacacc	ctgtccatgg	gcacgagcga	cgacctcgag	1020
gcagccatcg	gcgaagggtc	gacctgggtc	cgcacgggta	ccgcacctgt	cggcgcccg	1080
gactacggcg	cgcgcgcttc	ttgaatgaat	ccc			1113

<210> 3

<211> 66

<212> DNA

<213> Artificial Sequence

<220>

<223> ARC promoter

<400> 3

ctagagctat	tgatgtggat	caacattgtc	cactagccgc	tgccgcctaa	tctccagaat	60
tgtgag						66

<210> 4

<211> 685

<212> DNA

<213> Artificial Sequence

<220>

<223> UPCM2 cassette sequence

<400> 4

tcagaaaatt	attttaaatt	tccaattgac	attgtgagcg	gataacaata	taatgtgtgg	60
aagcttatcg	ataccgtcga	cctcgaaagc	ttggaaccct	gatgagtcgg	tgaggacgaa	120
acgatgacat	tctgctgacc	agattcacgg	tcagcagaat	gtcatcgctg	gttccaggat	180
ccggtgcta	acaaagcccg	aaaggaagct	gagttggctg	ctgccaccgc	tgagcaataa	240
ctagcataac	cccttggggc	ctctaaacgg	gtcttgaggg	gttttttgct	gaaaggagga	300
actatatccg	gatatccgc	aagaggcccg	gcagtaccgg	cataaccaag	cctatgccta	360
cagcatccag	ggtgacgggtg	ccgaggatga	cgatgagcgc	attgttagat	ttcatacacg	420
gtgectgact	gcgttagcaa	tttaactgtg	ataaaactacc	gcattaaagc	ttatcgatga	480
taagctgtca	aacatgagaa	ttcggcgat	acgcgaatt	tcaagggtct	gcgcaacgac	540
gacgatgagg	taccacatcg	tcgtcgttgc	gcactgatga	ggccgtgagg	ccgaaaccct	600
tgacgcgtaa	aaaaaaccgc	ccccggcggg	ttttttaccc	ttcctatgcg	gccgctctag	660
tcgagggggg	gcccgcctaga	actag				685

<210> 5

<211> 673

<212> DNA

<213> Artificial Sequence

<220>

<223> P2CM2 cassette sequence

<400> 5

agaaagcaaa aataaatgct tgacactgta gcggaagc gtataatgga attgtgagcg	60
gataacaatt cacaagctta tcgataccgt cgacctcgag ctttggaaacc ctgatgagtc	120
cgtgaggacg aaacgatgac attctgctga ccagattcac ggtcagcaga atgtcatcgt	180
cggttccagg atccggctgc taacaaagcc cgaaaggaag ctgagttggc tgctgccacc	240
gtgagcaat aactagcata accccttggg gcctctaaac gggctctgag gggttttttg	300
ctgaaaggag gaactatata cggatatccc gcaagaggcc cggcagtacc ggcataacca	360
agcctatgcc tacagcatcc aggggtgacgg tgcgaggat gacgatgagc gcattgttag	420
atttcataca cggtgectga ctgcgttagc aatttaactg tgataaacta ccgcattaaa	480
gcttatcgat gataagctgt caaacatgag aattcggcgt atacgccgaa tttcaagggt	540
ctgcgcaacg acgacgatga ggtaccacat cgtcgtcgtt gcgcactgat gaggccgtga	600
ggccgaaacc cttgacgcgt aaaaaaacc cgccccggcg ggttttttac gcgttcctat	660
gcggccgctc tag	673

<210> 6

<211> 14

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 6

agctcgagct caga	14
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<210> 7

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 7

tcgacggatc tagatcc	17
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<210> 8

<211> 56

<212> DNA

<213> E. coli

<400> 8

agatctaaat cattcacctg atgagtcctg gaggacgaaa ctttagcaaa ccaagg	56
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<210> 9

<211> 54

<212> DNA

<213> E. coli

<400> 9



agatctaaat tcgtttctga tgagtcctg aggacgaaac accacaaaag atct	54
<210> 10	
<211> 54	
<212> DNA	
<213> E. coli	
<400> 10	
agatctaaac cacatcctga tgagtcctg aggacgaaac agtttaaacc aagg	54
<210> 11	
<211> 55	
<212> DNA	
<213> E. coli	
<400> 11	
agatctaaac gatttcctga tgagtcctg aggacgaaac atcaccaaacc caagg	55
<210> 12	
<211> 56	
<212> DNA	
<213> E. coli	
<400> 12	
agatctaaat gcgtctgat agtcctgag gacgaaacag gcaggtaaaa ccaagg	56
<210> 13	
<211> 53	
<212> DNA	
<213> Streptomyces lividans	
<400> 13	
agatctaaag tactcctgat gagtcctga ggacgaaacc agcgaaacca agg	53
<210> 14	
<211> 55	
<212> DNA	
<213> Enterococcus faecalis	
<400> 14	
agatctaaaa cttttgctga tgagtcctg aggacgaaac gtgtataaac caagg	55
<210> 15	
<211> 54	
<212> DNA	
<213> Psudeomonas putida	
<400> 15	
agatctaaat cgctttctga tgagtcctg aggacgaaac gtgataaacc aagg	54
<210> 16	
<211> 54	
<212> DNA	
<213> Streptomyces coelicolor	
<400> 16	
agatctaaag tcgatgctga tgagtcctg aggacgaaac ttcgcaaacc aagg	54

<210> 17  
 <211> 56  
 <212> DNA  
 <213> *Staphylococcus warneri*  
  
 <400> 17  
 agatctaaat gcgtctgatg agtccgtgag gacgaaacag gcaggcgaaa ccaagg 56  
  
 <210> 18  
 <211> 38  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> B2 consensus  
  
 <400> 18  
 tgctcttctg atgagtcctg gaggacgaaa ccgcctga 38  
  
 <210> 19  
 <211> 39  
 <212> DNA  
 <213> *Mus musculus*  
  
 <400> 19  
 ttcaaagact gatgagtcctg tgaggacgaa acgaggatc 39  
  
 <210> 20  
 <211> 34  
 <212> DNA  
 <213> *Mus musculus*  
  
 <400> 20  
 gtccatctga tgagtcctg aggacgaaac cggc 34  
  
 <210> 21  
 <211> 36  
 <212> DNA  
 <213> HBV  
  
 <400> 21  
 attagagctg atgagtcctg gaggacgaaa caaacg 36  
  
 <210> 22  
 <211> 37  
 <212> DNA  
 <213> HPV  
  
 <400> 22  
 gtccctgactg atgagtcctg gaggacgaaa cattgca 37  
  
 <210> 23  
 <211> 44  
 <212> DNA  
 <213> *Homo sapiens*  
  
 <400> 23

tccgttgtct ctgatgagtc cgtgaggacg aaacatgaca ccga	44
<210> 24	
<211> 39	
<212> DNA	
<213> Homo sapiens	
<400> 24	
gcgaggagct gatgagtcg tgaggacgaa acatggtgt	39
<210> 25	
<211> 37	
<212> DNA	
<213> Mus musculus	
<400> 25	
aacttttctg atgagtcggt gaggacgaaa cataatg	37
<210> 26	
<211> 42	
<212> DNA	
<213> Rattus norvegicus	
<400> 26	
tcgaagctgt ctgatgagtc cgtgaggacg aaaccgcgtt ga	42
<210> 27	
<211> 37	
<212> DNA	
<213> Mus musculus	
<400> 27	
atcagggctct gatgagtcg tgaggacgaa aggtgcc	37
<210> 28	
<211> 37	
<212> DNA	
<213> Rattus norvegicus	
<400> 28	
tcttcgactg atgagtcggt gaggacgaaa catggct	37
<210> 29	
<211> 37	
<212> DNA	
<213> Homo sapiens	
<400> 29	
tagcacactg atgagtcggt gaggacgaaa cgtttga	37
<210> 30	
<211> 36	
<212> DNA	
<213> Homo sapiens	
<400> 30	
tgcaatactg atgagtcggt gaggacgaaa ctgect	36

<210> 31  
 <211> 36  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 31  
 aagtcacatctg atgagtcctg gaggacgaaa cctgga 36  
  
 <210> 32  
 <211> 36  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 32  
 gataaggctg atgagtcctg gaggacgaaa ctttcc 36  
  
 <210> 33  
 <211> 36  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 33  
 catattcctg atgagtcctg gaggacgaaa cactcg 36  
  
 <210> 34  
 <211> 38  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 34  
 tcatgtatct gatgagtcctg tgaggacgaa acaaaagg 38  
  
 <210> 35  
 <211> 36  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 35  
 ggtaaactg atgagtcctg gaggacgaaa cttggg 36  
  
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 <211> 36  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 36  
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 <210> 37  
 <211> 55  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> primer

<400> 37  
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<210> 38  
 <211> 59  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> primer

<400> 38  
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<210> 39  
 <211> 55  
 <212> DNA  
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<220>  
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<400> 39  
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<210> 40  
 <211> 46  
 <212> DNA  
 <213> Artificial Sequence

<220>  
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<400> 40  
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<210> 41  
 <211> 41  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> primer

<400> 41  
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<210> 42  
 <211> 41  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> primer

<400> 42  
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<210> 43  
 <211> 64  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> ribozyme construct  
  
 <400> 43  
 cttggaaccg gatgccaggc atccggttgg tgcctttcgt cctcacggac tcatcagtag 60  
 tgaa 64  
  
 <210> 44  
 <211> 65  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> ribozyme construct  
  
 <400> 44  
 cttggaaccg gatgccaggc atccggttaa gaagtttcgt cctcacggac tcatcagtta 60  
 cccta 65  
  
 <210> 45  
 <211> 65  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> ribozyme construct  
  
 <400> 45  
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 atctg 65  
  
 <210> 46  
 <211> 64  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> ribozyme construct  
  
 <400> 46  
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 gtgg 64  
  
 <210> 47  
 <211> 63  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> ribozyme construct

<400> 47  
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ttg 63

<210> 48  
<211> 64  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> ribozyme construct

<400> 48  
aattcaaccg gatgccaggc atccggttaa cctttttcgt cctcacggac tcacagctc 60  
tacg 64

<210> 49  
<211> 170  
<212> RNA  
<213> Artificial Sequence

<220>  
<223> pClip triple ribozyme

<221> modified\_base  
<222> (1)...(170)  
<223> n=a, c, g, or u

<400> 49  
gcggccgcuc gagcucugau gaguccguga ggacgaaacg guacccggua ccgucagcuc 60  
gagaucunnn nnnncugaug aguccgugag gacgaaannn nnagaucgcu cgacggaucu 120  
agaucggucc ugaugagucc gugaggacga aacggaucug cagcggccgc 170

<210> 50  
<211> 249  
<212> RNA  
<213> Artificial Sequence

<220>  
<223> pChop triple ribozyme

<220>  
<221> modified\_base  
<222> (1)...(249)  
<223> n=a, c, g, or u

<400> 50  
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acgaaannnn nnnnnggaau uccaagggucc ugcgcaacga cgacgaugag guaccacauc 180  
gucgucguug cgcacugaug aggccgugag gccgaaaccc uugacgcguu ccuauccggc 240  
cgucucuaga 249

<210> 51  
<211> 364  
<212> DNA

213> Artificial Sequence

<220>

<223> pSnp ribozyme cassette

<400> 51

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ctcagatctc tcgagcaatt gatccgtcga cggatgtaga tccgtcctga tgagtcctgt	120
aggacgaaac ggatctgcag cggatatcca gctttggaac cctgatgagt ccgtgaggac	180
gaaacgatga cattctgctg accagattca cggtcagcag aatgtcatcg tcggttccag	240
gataccttgcc tgaattccaa gggctctgcgc aacgacgacg atgaggtacc acatcgtcgt	300
cgttgcgcac tgatgaggcc gtgaggccga aacccttgac gcgttcctat gcggccgctc	360
taga	364

<210> 52

<211> 685

<212> DNA

<213> Artificial Sequence

<220>

<223> modified pChop cassette

<400> 52

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aagcttatcg ataccgtcga cctcgaagct ttggaacct gatgagtcg tgaggacgaa	120
acgatgacat tctgtgacc agattcacgg tcagcagaat gtcacgtcg gttccaggat	180
ccggtctgcta acaaagcccg aaaggaagct gagttggctg ctgccaccgc tgagcaataa	240
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<213> *Streptomyces coelicolor*

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